EPA Safer Choice Partner of the Year Award

Nomination Application for:
Apple
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Our Approach

At Apple, people come first in everything we do, and the products we create are an extension of that value. Putting people first includes working from the earliest stages of product design to ensure that the materials, machines, and processes we use in the manufacturing of our products take into consideration the health and safety of those working in our supply chain and those that use our products.

Apple continues to lead on smarter chemistry, pushing for the development and adoption of new materials that, not only can have a positive impact on human health and the environment, but also improve how our industry operates.

Our work begins with the materials in our products. By focusing on safety in our product designs, we strive to protect the people who design, make, use, and recycle our devices. Through close engagement with leading members of the scientific community, NGOs, and industry initiatives, we aim to drive a broader global shift toward materials that are safer to use and reuse.

To do this right means applying higher standards and ensuring that those we work with comply with these standards. We've done this with our Regulated Substances Specification (RSS), which is our foundational tool for creating environmentally friendly products, and for making material decisions that help protect the health and safety of those working in our supply chain. Our RSS, which was established in 2014 and updated regularly ever since, exceeds many regional regulatory requirements. The RSS describes Apple's global restrictions on the use of certain chemical substances in Apple's products, accessories, manufacturing processes, and customer packaging.

In 2016, we expanded the RSS to include process chemicals, focusing on cleaners and degreasers. Cleaners and degreaser are some of the largest volume process chemicals used in our supply chain, and therefore, a high priority for substitution in terms of eliminating exposure to potentially hazardous chemicals. Our latest version of the RSS, released in 2021, includes enhancements that further promote safer process chemicals, protecting people around the world that make our products.

As we drive innovation — promoting the development and use of safer materials — we seek to share what we learn with others in the industry. As we and our suppliers identify and design new materials and chemistries, we are committed to taking a leadership role in evaluating and pursuing safe and sustainable alternatives — and promoting this progress beyond our supply chain.

Each year, Apple documents our progress in smarter chemistry in our People and Environment in Our Supply Chain Report, and our Environmental Progress report:
https://www.apple.com/supplier-responsibility/
https://www.apple.com/environment/
https://www.apple.com/environment/pdf/Apple_Regulated_Substances_Specification_March2021.pdf

2020 Milestones and Achievements

Using safer chemical alternatives in our supply chain

EPA Safer Choice has been foundational to our continuing efforts to transition to safer process chemical alternatives. We assess the process chemicals required with each design choice as we select the materials used to manufacture our products. We account for the storage and application of each chemical, evaluating the exposure to potentially harmful chemicals. In 2020, we conducted more than 100 reviews of process chemicals so we could, where appropriate, adopt safer alternatives before production started. For these assessments we use frameworks like the EPA Safer Choice criteria and we conduct exposure assessments to proactively eliminate risks to people and the environment in our global supply chain.

Done well, advancing smarter chemistry requires a significant investment of time and resources — from gathering information, to assessing data, to developing safer alternatives. While our suppliers are required to assess the potential hazards associated with the chemicals they use, and to ensure controls and worker protection measures are in place to mitigate the risk of exposure, they do not often have the capacity to seek out safer alternatives as a preferred solution. For this reason, we support our suppliers by sharing the safer alternatives we've identified, and by promoting the use of substances that meet our standards.

While we also review our suppliers' inventories for potentially harmful chemicals, we've found that creating a list of approved cleaners and degreasers safe for use can often be even more effective to accelerate adoption. Starting in 2017, we've invested in the in-depth assessment and evaluation of these chemicals, incorporating leading guidance by the EPA Safer Choice program and GreenScreen®, to develop, and continually update, a list of safer cleaners and degreasers for use at our final assembly sites.

Since the inception of this effort, all of our supplier final assembly sites have utilized only these safer alternatives some of which include EPA Safer Choice certified products. In 2020, we evaluated 54 new cleaners, of which 33 passed our assessment, bringing our total approved alternatives to cleaners and degreasers to 80. More than 80,000 employees in our supply chain now use safer alternative cleaners and degreasers.

We also provide training and assessment tools, based on the EPA Safer Choice program and the GreenScreen® framework, to help suppliers conduct their own evaluations of safer alternatives. In addition, we provide a list of ingredients with assessment results for Apple engineers to search and determine whether the cleaning products they are proposing meet safer cleaner requirements. While the list is based on Apple's own assessments, we use third-party reviewers, including ToxServices, to assess these materials against frameworks such as EPA Safer Choice and GreenScreen®.

Promoting EPA Safer Choice Program among Apple suppliers and cleaner manufacturers

We widely promote the use of the EPA Safer Choice program among our extensive, global network of suppliers, cleaner manufacturers, and others in our industry, as well as the importance of identifying and using alternatives from EPA's Safer Chemical Ingredients List. We do this through the guidance we provide to suppliers, public Apple communications, such as our annual People and Environment in Our Supply Chain Report, and Environmental Progress Report. One hundred percent of our supplier final assembly sites use Safer Cleaners. Our team directly runs this training at these supplier sites to train them on this approach and EPA Safer Choice thinking/approach is in the training material.

Working with others to expand impact beyond Apple's supply chain

In 2019, we began scaling the adoption of safer cleaners and degreasers beyond Apple's supply chain. We started with tackling the lack of a comprehensive industry-wide standard for defining what constitutes a safer cleaner. We worked with Clean Production Action, an independent, third-party expert, to create criteria that can be used across the electronics industry to assess safer cleaners. This enables chemical manufacturers and suppliers to have the cleaners and degreasers they use assessed at hundreds of testing laboratories around the world using a common framework. The safer cleaners criteria were also reviewed by our Green Chemistry Advisory Board, a group of the world's leading toxicologists, researchers, and academics focused on integrating green chemistry into Apple's products and supply chain.

In 2020, the first two cleaner formulations were independently evaluated against the comprehensive safer cleaner criteria. By using the EPA Safer Chemical Ingredient List (SCIL), we can simplify validation against several criteria and eliminate redundant elements of the hazard assessment. Simplifying the assessment and identification of safer alternatives will accelerate the use of safer cleaners across the global industry.

As a next step, we're working to communicate the availability of the assessment framework and cleaner formulations that have met all the criteria. To accomplish this, we're collaborating with Chem*FORWARD*, a nonprofit convening brands, retailers, suppliers, and environmental organizations that share high-quality, actionable chemical hazard data to establish a globally harmonized repository. With Chem*FORWARD*, we'll share our evaluation framework with companies beyond our suppliers, and even our industry, and the list of chemical formulations that conform to the safer cleaner criteria. We've also worked with the Clean Electronics Production Network (CEPN), a multi-stakeholder initiative working to address health and safety challenges in the electronics supply chain, to develop the Process Chemicals Data Collection (PCDC) Tool. The PCDC tool is a free, standardized reporting tool that improves the process of collecting and managing data related to process chemicals usage in the electronics industry. The tool creates an industry-wide format for consistent collection of information across the supply chain, and enables identification and quantification of chemical use to help drive safer substitutions across the industry. This effort has a direct impact and the potential to change how our industry operates.

Advancing Chemical Disclosure in the Global Supply Chain
One example of how we're innovating to advance safer chemistry is through our Chemical Safety Disclosure program. This program advances disclosure related to the chemistries used in manufacturing processes for our products by working with participating suppliers to identify how chemicals are used and stored, as well as what mechanisms suppliers have in place to protect their employees. This enhanced transparency allows us to help our suppliers prioritize chemistries for substitution or management through enhanced controls and safety procedures.

This effort captures information on process chemicals across our global supply chain. In 2020, we set out to conduct an extensive chemical inventory mapping, collecting data on more than 600 facilities, representing 80 percent of our largest suppliers by spend. This included identifying 14,000 unique uses of process chemicals and, most importantly, what mechanisms suppliers have in place to keep their employees safe.

By undertaking this work, we have been able to quickly identify potentially hazardous chemicals, and prioritize them for substitution and removal from the supply chain. This comprehensive inventory of chemicals also allows us to find the most effective ways to reduce risk, protect supplier employees, stay ahead of new regulations, and identify opportunities to further advance smarter chemistry in our supply chain. We plan to complete the mapping of our largest suppliers by the end of 2021.

Advancing Low-VOC Initiative
Volatile organic compounds (VOCs) are commonly found in consumer products and related manufacturing processes. VOCs are also major contributor to smog and overall poor air quality, which can adversely affect human health in local communities, making it not just an environmental issue, but an issue of environmental justice. While proper ventilation and engineering controls can protect the health and safety of those working in supplier facilities, we went a step further to protect those working in our supply chain and the surrounding communities.

In March of 2020, China released the national regulation around VOCs as part of its "Blue Sky Initiative." We previously had requirements in place governing VOCs — which often appear in inks, coatings, adhesives, and cleaners — to track how our suppliers use them and restrict their use in select applications. As part our compliance with the new regulations, we collected and analyzed more than 7,000 materials, identified those containing high levels of VOCs, and substituted with qualified low-VOC replacements.

We took these efforts further by providing training to more than 2,000 suppliers, and deployed a new VOC specification worldwide to help drive adoption of low-VOC alternatives. Through this specification, we're signalling to our suppliers around the world the importance of these improved alternatives. In addition, we've helped chemical manufacturers reformulate their safer cleaner formulations to meet the new VOC requirements

The global regulatory and compliance landscape continually evolves. Our environmental approach, and the science we work from, mean our requirements may exceed those of local material safety regulations. When new regulatory benchmarks are put in place, we work directly with our suppliers to take steps to support the development of compliant programs at each of our suppliers' facilities. This process involves direct local-language training covering our RSS, our Full Material Disclosure and Chemical Safety Disclosure programs, and new compliance standards.